General Index

Abiotic conditions 185
Abramis brama 31, 93, 176, 213, 214, 218, 220, 234, 286, 291, 307
abundance 68, 150, 165, 166, 170, 186, 224, 225, 229, 308
  benthivorous species 238
  cladocerans 168, 207
  copepods 168
  crustaceans 169
  fluctuations of avian foraging guilds 237
  Mesocyclops 43
  microciliates 116, 118
  microcrustaceans 67
  nanociliates 116, 118
  piscivorous birds 224, 225
  relative 44, 68
  rotifers 207
  zooplankton 95
Acanthobrama lissneri 40
Acanthocyclops robustus 165, 167, 179
acid lakes 105
acidity 109, 110
actinopods 177
activity 13
  coefficient 19, 20
  heterotrophic organisms 195
  photosynthesis 15
aerial photography 257, 258
aerobic conditions 195
age classes 70
  structure of fish stock 149
agricultural irrigation 316
Alburnus alburnus 234
Alcedo atthis 226
Alderfen Broad 67, 68, 69, 71
aldrin 191
algae 17, 47, 50, 55, 95, 124, 129, 131, 251, 253, 275
  abundance 11, 126, 127, 199
  analysis 49
  biological control 49
  biomass 4, 15, 19, 98, 105, 106, 123, 124, 125, 126, 152, 170, 241, 242, 243, 250, 311
blooms 29, 57, 59, 65, 98, 287
blue-greens 4, 5, 15, 17, 19, 29, 31, 34, 47, 49, 52, 57, 58, 77, 124, 125, 126, 127, 130, 174, 185, 199, 201, 218, 220, 244, 246, 253, 265, 311, 320
  non-fixing 97
  non-toxic 267
cells 124
cell volume 108, 109
coccal greens 140
colonies 124, 226, 267
community 199, 220
  loss rates 130
composition 15
concentrations 175
counts 167
cultures 14, 244
density 123, 265
filamentous 23, 249, 266, 267
  density 265
  length 265
greens 15, 17, 50, 93, 130, 245
growth 14, 57, 78, 129, 241, 319
  phosphorus limited 90
  rates 129
  kinetics 241
loss rates 129
mesotrophic vegetation 19
number 51, 53
phosphorus states 14
production 130
quantity 50, 52
trichomes 124
alkaline phosphatase activity 9, 13
alkalinity 10
Alonella rostrata 167
Alosa fallax lacustris 7
alpine lakes 199, 205
aluminium concentration 108, 109
Amherst Point National Wildlife Area 107
ammonium (NH_4; NH_4-N) 10, 97, 98, 141, 142, 143, 158, 176

concentration 145
– nitrogen 23, 24, 25, 200, 202
removal from water 26
amphipod biomass 269, 273
individuals per macrophyte unit 271
number 271
Amphipoda 269, 272
number 269
size frequency 269, 270
Amsterdam-Rhine Canal 87, 90, 131, 132, 173
Amur River Region 54
Anabaena sp. 15, 19, 49, 98, 127, 253
flos-aquae 253
Anabaenopsis raciborskii 253
anaerobic pathways 191
Anguilla anguilla 219, 220, 291
annual bream yields 214
commercial fish yield 218
energy flow 218
fishing effort 214
food turnover 215
total fish catch 220
anoxic conditions 93, 145
Anuraeopsis fissa 178
Anuraeopsis sp. 174, 177
Aphanizomenon 19
flos-aquae 102, 161, 252, 253, 265
f. klebahnii 249, 310
f. issatschenkoi 310
blooms 98, 103, 276
apparent growth rate 135, 136
Arcella sp. 177
Ardea cinerea 226
Armenia 15, 16
Arpa river 16
As 190
Ascomorpha ovalis 205
saltans 205
ascorbic acid-molybdenum blue method 140
asp 218
Aspius aspius 218
Asplanchna 40, 177
assimilation rate 89, 293
Asterionella formosa 11, 175
attenuation coefficient 241
Austria 199
autolytic cell disintegration 120
autotrophic organisms 150
picoplankton 120
autotrophs 17
autotrophy 150
autumn passage 237, 239
avian populations 224
Aythya ferina 233, 235, 238
fuligula 233, 235, 238
marila 235
Bacillariophyta 165
background attenuation coefficient 243
colour 241
bacteria 55, 111, 123, 184, 255, 315
concentrations 114
free-living 113
bacterial abundance 113
concentrations 113, 119
consumers 116
decomposition 213
destruction 195
diet 120
grazers 111
production 121, 184, 308, 310, 312
by grazing flagellates 120
bacterioplankton production 10, 12
respiration 12
bacterivores in shallow waters of Hawaii 120
balanced ecological system 55
batch culture 12
benthic activity 146
fauna 109
food 61, 66
benthivores 235, 237
benthivorous bird community 239
feeding 35
fish 36, 312
species 233
benthophage fish 54
benthos 62
feeders 233
bighead carp 49
bioactivity 195
bioassay 288, 292
bioenergetic value of molluscs 240
biological control 47, 53, 316
filter 53
production in acidic lakes 109
stratification 249, 251
biomanipulation 93, 275, 287, 289, 316, 319, 320
strategy 316
treatments 316, 317
biomass 4, 5, 6, 9, 11, 13, 18, 19, 23, 25, 26, 39, 112, 130, 131, 191, 195, 218, 228, 235, 244, 245, 257, 258, 260, 261, 270, 275
density 26
development 9
herbivore 7
individual 183
maximum 11, 19
Abramis brama 29
algae 17
bleak 40
blue-green algae 127
bream 31, 32, 33, 34, 35, 36
chironomids 190, 192, 196

cladocerans 152, 167, 168
copepods 168, 169
crustaceans 169
cyclopoid nauplii 152
Daphnia hyalina 29, 32, 34, 35
diatoms 17
herbivorous crustaceans 6
HNF 115
molluscs 234
Osmerus eperlanus 29
phytoplankton 17
pikeperch 31, 32, 33
rotifers 152,
smelt 31, 32, 33, 34, 35
Stizostedion lucioperca 29
Vaucheria dichotoma 23, 24, 25
reduction 39
bioperturbation 291, 319
biota 7
biotic factors 185
bird community 235
pressure on molluscan population 240
species distribution 239
birds 235
birth rate 208, 209
black carp 47, 53
Black Sea 16
black-headed gull 223, 227, 228
bleak 6, 234
Blicca bjoerkna 291
bloom 6, 166
collapse period 102
period 40
blowing effect 254
bluegill sunfish 223
body mass of chironomids 192
boezem 75
system 77, 78, 80, 83
Bosmina 41, 60, 61, 62, 174, 180, 185, 208, 278, 285
coregoni 58, 63, 64, 174, 178, 179, 185, 186, 205
longirostris 40, 43, 50, 57, 165, 167, 174, 178, 179, 185, 186, 275, 290
bottom fauna 93, 234
stratum 251
– feeders 55
bottom-up effects 36
forces 65, 315, 316
system 44
Brachionidae 177
Brachionus 158, 177, 289
angularis 289
calyciflorus 154, 155, 156, 157, 159, 160, 184, 289
urceolaris 154, 155, 156
Brandemeer 75, 84
bream 29, 31, 33, 34, 35, 59, 65, 93, 176, 213, 214, 218, 234, 240, 275, 286, 291, 312, 313
populations 215
breeding 225
period 234, 237
Bucephala clangula 233, 235, 238
Bug River 234, 235, 239
burbot 59
Bythotrephes longimanus 63, 205, 207, 208, 210

^{14}C technique 214, 308
– fixation 247
– marked bicarbonate 152
– method 12, 106
$CaCO_3$ 301
C:P ratio 13
of seston 91
calanoids 179, 185
calorific values of food invertebrates 215
Campylodiscus noricus 309
Canada 97, 105
cannibalism 66, 121
Cape Breton Highlands National Park 107
capture rates 226
carapace gape 186, 267
carbon 257, 260, 261, 293
and energy flow 111
content of bacteria 120
particulate 203
– balance 44
– tracer method 89
carp 47, 218, 275, 291
Carpathian Basin 218
carrying capacity 220
Caspian Sea 16
catch-per-unit effort (CUE) 213, 214
catch total 7
catches with fyke nets 59
Caucasus 15, 16
Cd 190
cell growth 119
maintenance 241
pigmentation 133
volume 5, 106
census 234
central Europe 250
central Poland 233
Ceratium hirundinella 251
Ceratium spp. 253
Ceratophyllum demersum 70
Ceriodaphnia 178
quadrangula 179
reticulata 40, 159
rigaudi 40, 50
Ceriodaphnia spp. 40, 41, 43
Chalcalburnus chalcoides mento 208, 210
Chara 288
Chara globularis 285, 291
charophyte-dominated ecosystems 87
chemical environment 150

micro-stratification 253
chemistry 319
chemostat 242
Chezy-model 77
chironomid biomass 191, 195
communities 191
fauna 189, 193
numbers 195
production 195
Chironomidae 189
larvae 234
chironomids 31, 197, 218, 290
body mass 190
sediment-dwelling 189
Chironominae 190
Chironomus balatonicus 191, 195
plumosus 176
Chironomus sp. 190
Chlamydomonas sp. 289
chloride concentration 75, 77, 78, 79, 84
model 77
sequence 78
chlorinated hydrocarbons 190, 191
chlorine treatment 51
Chlorococcales 161, 165, 167, 278
Chlorophyceae 170
chlorophyll *a* 5, 11, 15, 17, 25, 31–33, 36, 87, 88, 90, 98–102, 106, 129, 130, 131, 133, 135, 137, 141, 142, 143, 144, 149, 152, 155, 156, 160, 165, 166, 167, 169, 176, 213, 214, 215, 217, 220, 224, 241, 244, 245, 246, 257, 262, 278, 288
concentration 4, 9, 11, 34, 35, 75, 89, 90, 92, 113, 123, 131, 136, 137, 154, 156, 216, 242, 243, 247, 293, 308, 312
epipelic 129, 134, 135
content of *V. dichotoma* 23
level 157
sestonic 134
chlorophyll-specific uptake 130
Chlorophyta 43, 44
chlorophytes 97, 311
Chrysochromulina parva 98
chrysomonads, chloroplast-containing 111
Chrysophyceae 102, 207
chrysophytes 98, 278
Chydorus 61, 62, 180
sphaericus 6, 41, 58, 63, 65, 179
ciliate community 121
concentrations 116
production 121
ciliates 111, 112, 113, 116, 120, 177, 255
clearance rates 118
density 255
ingestion rates 118
circadial rhythm 249, 251
circulation, spring and autumn 26
Cladocera 6, 39, 40, 43, 44, 50, 62, 65, 116, 161, 179, 180, 184, 204, 205, 206, 208
densities 39, 178
diversity 177
grazing capacity 39
non-planktonic 71
raptorial-feeding 205
ratio of small/large individuals 41
cladoceran females numbers 160
cladocerans 31, 32, 170, 185, 265, 267, 313
clams 47
Clangula hyemalis 237
climatic conditions 11, 71, 157, 161
control 71
factors 9
Closterium aciculare 310
clumped distribution of fish 230
cluster-analysis 251
Co 190
COD method 175
COD_{Mn} 300, 302, 303, 304
coefficient of Van't-Hoff 20
Coelosphaerium kuetzingianum 249, 252, 253
Coleps sp. 177
collapses 153, 155, 156, 158, 159
in phytoplankton biomass 141
of blue-greens 218
Collotheca 177
colonial forms 177
colonisation 260
colonizing 26
colony-forming species 249
commercial catches 61, 65
of whitefish 60
fish harvest 214, 215
yield 219
common carp 47, 53, 55
growth 54
scoter 235
tern 226, 228
communities, animal 7, 15
biological 7
biotic 7
plant 7
structure and dynamics, planktonic 15
community density 183
diversity 234
of autotrophs 15, 19
structure 4, 185, 223, 315
competition 7, 63, 71, 72, 127, 185, 199, 200, 207, 211, 223
for benthic food 65
for crustacean zooplankton 71
for food 184
for light 247
for zooplankton 65, 72

interspecific 219
intraspecific 219
with phytoplankton 262
Competitive displacements 250
exclusion 160
complex defensive behaviours 230
interactions 316
condition of spawning population 70
conductivity 10
Conochilus 177
unicornis 6
consumers 316
consumption 223
rate of piscivorous fish 226
rates 227, 229, 230, 293
continuous cultures 241
conversion of light energy 137
coot 233, 235, 237, 239, 240
Copepoda 6, 31, 39, 40, 43, 44, 71, 116, 184, 204, 205, 206
populations structural changes 40
copepodite stages 170
copepodites 155, 156, 205
copepods 167, 170, 179, 290, 313
copper sulphate 47
coregonids 60
Coregonus 'bondella' 7
'lavarello' 7
albula 71
nilssoni 60
Coregonus sp. 6
Corophium curvispinum 269, 270, 272, 273
size distribution 271
CPCB Program 233
Cr 190
critical limiting value of organic carbon 191
Crucigenia quadrata 249, 252
Crustacea 89, 95, 173, 177, 269
biomass 182, 204, 207
densities 179, 180, 181, 184
numbers 174
species 179
crustaceans 170, 185, 205, 313
development time 170
sympatry 184
cryptomonads 161
Cryptomonas spp. 98, 154
Cryptophyceae 157, 167, 207, 289
cryptophyceans 201
cryptophytes 140, 155, 278
Ctenopharyngodon idella 315
Cu 190
CUE 215, 217
Cyanobacteria 92, 161, 173, 174, 175, 184, 185, 186, 289
spores of heterocystic 311
Cyanophyta 170, 278
bloom 99, 100
nitrogen-fixing 97
Cyclopidae 40
Cyclopoda 62
cyclopoid copepods 176, 179, 181, 184, 185, 275, 278, 290
stages 179
Cyclops abyssorum 6, 205, 206
Cyclops spp. 58, 60, 64, 65, 290
Cyclops vicinus 155, 156, 159, 160, 167, 179
Cyclotella 47, 98
comta 249, 252
ocellata 309
Cymatopleura elliptica 309
var. *constricta* 309
var. *nobilis* 309
var. *hibernica* 309
cyprinids 57, 59, 60, 223, 227, 275
Cyprinus carpio 218, 291

daily consumption rates 228
discharges 78
elimination rate 208
food consumption 213
dam reservoir 233
Danube cross-section 169
Danube River 165, 166, 167, 169, 170
Daphnia 57, 60, 61, 62, 65, 185, 265, 285
cucullata 63, 167, 174, 178, 179, 181, 185, 186, 205, 207, 210, 290
dynamics 209
density 266
feeding on blue-greens 267
filtering apparatus 267
galeata 120
grazing 266
hyalina 6, 29, 31, 33, 120, 127, 177, 179, 185, 205, 207, 210, 275, 288, 290
dynamics 209
longispina 63, 155, 156, 157, 158, 159, 160, 177, 290
magna 93, 159, 265, 275, 278, 288, 290
polymorpha 240
pulex 267
Daphnia spp. 58, 159, 180, 207
dark respiration rate 92
DDE 191
DDT 191
death rate 208
decay rates 262
decomposers 170
decomposing processes 191
decomposition 257, 261, 262
rate 146
denitrification 12, 144, 145, 311
activity 145
Denmark 139, 140, 255
densities of macro-invertebrates 71
density of *Asplanchna* 42
Cladocera 41, 67
Copepoda 42

adults 41
nauplii 41
Crustacea 52, 125, 173
filter-feeders 159
herbivorous zooplankton 153
Keratella 42
rotifers 125, 156, 173
Synchaeta 42
optical 75
– biomass relationship 182
Dephosphorization Units 76
dephosphorization 87, 90
desmids 253
detrital chain 169
detritus 50, 55, 120, 191, 195, 218, 246
as food 269
concentration 184
fraction of the seston 129
resuspension 55
– feeding larvae 195
developmental stages 273
Diacyclops bicuspidatus 179
dialysis sacs 119
Diaphanosoma 40, 41, 43, 178
brachiurum 6, 40, 50, 58, 64, 179
Diaptomus 57
diatom biomass 205
blooms 98
Cyclotella 52
Navicula 52
populations 204
Diatoma elongatum 175
diatoms 4, 9, 11, 13, 14, 15, 17, 50, 93, 98, 102, 140, 170, 175, 199, 201, 204, 209, 253, 278
dynamics of biomass 19
dieldrin 191
diet composition 227
perch 60, 62
whitefish 60
dietary overlap 71
Difflugia 177
Dikerogammarus haemobaphes 269, 272, 273
Dikerogammarus spp. 270
villosus 269, 272, 273
dilution factor 112
rate 131, 242, 244
dinoflagellate bloom 13
dinoflagellates 9, 11, 13, 40
Diptera 189
dispersal period 234, 237
dissolved oxygen concentration 262
silicate 199
distribution of amphipod species 270
benthivores 240
birds 234
molluscs 234, 236
V. dichotoma 23
waterfowl 233, 234
diversity 4, 251, 309
DNA of bacteria 308
drainable ponds 275
drainage water 36
Dreissena polymorpha 233, 234, 235
drinking water 316
Dutch lakes 186
dynamic activities 7
dynamics of primary production 18, 19
molluscs 235
trophic levels 150

echograms 216
echosounding records 213
Echtener Veenpolder 78, 80, 83
ecological communities 223
efficiency 165, 169, 170
ecology 199
ecosystem modification 316
response 20
structure 44, 229, 316
eel 59, 65, 219, 291
efficiency, degree 220
of energy transfer 213, 214, 215
egg number 156, 157, 269, 270, 272, 273
production 159, 160, 170
– carrying female 269, 270, 271, 272, 273
electivity index 208
electrofishing 68, 291
Elodea nuttallii 291
emergence dynamics 193, 194
intensity 194
periods 194
emergent 257
macrophytes 261
species 258, 260
emerging chironomid adults 196
enclosures 159, 307, 308, 309, 310, 311, 312, 320
energy 242
balance 241, 242, 244
budget 189, 195, 215
and transfer 220
consumption 213
conversion 241
demand 241
dissipation within the ecosystem 220
diverted from growth 242
flow 195, 214, 218, 220
within the planktonic system 121
flux 213
through benthos and periphyton 220
requirement 220, 234, 235, 239
transfer 213
efficiency 170

transformation 214
turnover 218
England 67
enhancement 42
Enteromorpha 291
environmental conditions 175
factors 126, 182
perturbations 219
structure 223
variables 149
enzyme production 13
epilimnetic assemblage 209
epilimnion 10, 11, 43, 44, 123, 124, 199, 200, 201, 204, 209
epipelon 89, 133, 244
escape responses 71
Eshkol reservoir 49, 51, 52, 53
Esox lucius 71, 218, 228, 275, 291, 285, 286
eu-polytrophy 169
Eucyclops serrulatus 167
Eudiaptomus 61, 290
gracilis 179, 185, 205, 206
graciloides 58, 63, 65
padanus padanus 6
Eudorina spp. 253
euphotic zone 4, 19, 200, 203, 204, 205
Eurytemora lacustris 179
eurythermal species 206
eutrophic conditions 184, 190
lakes 26, 84, 96, 98, 102, 108, 144, 158, 161, 177, 223, 224, 258
systems nitrogen-limited 97
eutrophication 1, 4, 7, 15, 16, 20, 29, 30, 31, 36, 57, 60, 65, 75, 77, 93, 98, 123, 129, 130, 139, 149, 160, 165, 170, 173, 185, 189, 191, 195, 216, 219, 241, 257, 275, 319
general models 7
reservoirs 49
eutrophy 186
evaporation 31
excretion 257
rate 89
scheme of Hieltes & Lijklema 84
exploitation 7, 220, 234
of salmonids by cormorants 229
exploitative competition 207
external impacts 220
loading from polder water 79
standard-channels-ratio-method 152
extinct fish species 219

Fe 190
fecundity 67, 70, 169
spawning population 70
feed-back mechanisms 43, 150, 213
feeding activity 43
Daphnia 265
behaviour 39, 93, 174, 220
conditions 71, 229
efficiency 35
roach 70
habits 40
Daphnia hyalina 34
HNF 119
periodicity 226
rates 229
requirements 229
FeEDTA 244
fertilized fish-ponds 191
filament density 266
length 265, 267
size distribution 266
Filinia longiseta 289, 290
Filinia cornuta 289, 290
Filinia sp. 177
filter feeders 39, 40, 58, 158, 159, 160, 179, 180, 265
growth 161
reproduction 160
survival 160, 161
filter-feeding fish 40, 43
filtering chamber 267
filtration 255
fingerlings 40
fish 29, 31, 36, 40, 53, 54, 149, 200, 307, 315
age composition 161
benthic feeding 59
biomass 53, 176, 229, 275
bottom-feeding 47
bottom-living 55
captures 226, 227, 291
carrying capacity 213, 220
community 7, 31, 57, 59, 60, 65, 68
native 7
structure 7
density 161, 214, 216
distribution 217, 219
farming 316
food 240
consumption 39
freshwater 57
growth 47, 53, 67
gut analysis 208
harvesting 161
horizontal distribution 213, 214
interactions 230
larvae 36
macrophytivorous 315
management 93
planktivorous 44, 158, 159, 184
plankton feeding 59
populations 7, 40, 93, 219, 223, 224, 234
structure 158
predation 40, 173, 185, 315

production 7, 218, 219, 220, 316
size-selective predation 58, 65
spawning 160, 161
species 218
stock 161, 214
stocking 39
vertical distribution 210
visual-attack-predation pressure 39
yields 213, 214, 215, 216, 218, 220
– predation 186
– proof barrier 227
– zooplankton predation 39
fisheries 39, 40
management 30, 36, 39, 44
statistics 214
fishery biology 319
fishing areas 214
effort 220
flagellates 120, 175, 185, 186, 201, 249, 255
floating-leaved macrophytes 261
species 260
flow rates 49
fluorescence 14
food 209, 213
abundance 193, 195, 240
availability 184
chain 90, 195, 315, 319
collection efficiency 265
composition 40, 185
conditions 161, 166, 223
consumption 214, 218
limitation 208
bream 218, 220
eel 220
pikeperch 218, 219
roach 65
organisms 214
partitioning 200
preferences 206
quantity 214
radioactively labelled 267
relationships 269
requirements 44
resources 40
selectivity 174
size spectrum 267
sources 39, 40, 55
supply 169, 206, 239
turnover of bream 214
uptake 185
web 65, 150, 213, 218, 220
– limitation 160
– quality 159
manipulation 315, 316
structure 39
foraging activities 226
piscivorous birds 223
behaviour 229
conditions 223
guild 235, 237
places selectivity 240
tactics 230
Fragilaria crotonensis 253
free enzymes 13
exoenzymes 13
frequency of occurrence 25, 214
fresh weights 12
freshwater fish 223
FRG 111, 112
Friesian lakes 29, 30, 75, 76, 84, 186
Fulica atra 233, 235, 238

gape size 230
Gasterosteus aculeatus 234
Gastropus stylifer 205
Georgia estuaries 120
gillnet catches 59
fishery 29, 31, 35
gilvin 242, 245
glycogen 92
goldeneye 233, 235, 237, 239, 240
grass carp 47, 53, 315
grazers' population 178
grazing 57, 129, 130, 137, 184, 186, 200, 253, 255, 266
coefficient 112, 113
effect 119
food chain 206
– web 149, 159
impact of marine microzooplankton 119
pressure 93, 112, 119, 160, 199
of HNF 116, 117, 120
on pelagic bacteria 113
rate 113, 115, 119, 158, 220
great crested grebes 223, 224, 225, 226
grebes 226, 227, 229, 230
grey heron 223, 226, 227, 228
mullet 47, 53, 54, 55
Groote Brekken 75, 78
gross growth efficiency 120
growth 199
conditions 176
kinetics 242
P. hollandica 131
pelagic bacteria 112
perch 60
Prochlorothrix hollandica 129
roach 62, 63, 65, 67, 68, 69, 70
silver carp 52
whitefish 66
phases 158
rate 60, 68, 71, 72, 112, 130, 131, 204, 241, 243, 245, 246, 247

roach 69, 70
bacteria 119
retarded 62
– limiting nutrient 131
gulls 230
gut content 61, 266, 267
perch 61
Daphnia 265
roach 62

^{3}H-thymidine incorporation 12
habitat use 223
HCH 191
heavy metals 190, 191
herbivores 6, 235, 237
herbivorous Crustacea 6
heron 227, 229, 230
Heterocope saliens 6
heterotrophic nanoflagellates 111
cell numbers 113
heterotrophs 150
heterotrophy 150
heterotrophic flagellates 255
Hidvég reservoir 297, 298, 299, 300, 301, 305
high pH 149
HNF 111, 113, 120
biomass 116, 119
clearance rates 113, 116, 117, 120
concentrations 112, 113, 114
grazing 112
grazing rate 120
ingestion and clearance rates 113, 116, 120
ingestion rates 116
population dynamics 120
populations 113
production 116, 120, 121
rate 120
holo-oligomictic lake 1
holomictic lake 23
Holopedium gibberum 63
homeostasis 197
homoiothermic piscivorous birds 229
human activity 3
impacts 219
Hungarian Danube section 165
Hungary 165, 189, 213, 249, 269, 297, 307
hydrochemical regime 16
Hydrodictyon reticulatum 291
hydrographic characteristics 1
hydrology 75, 84, 319
hypereutrophic lakes 19, 98, 102, 103
hypertrophic lakes 26, 31, 139, 140, 149, 150, 159, 161, 255, 258
hypertrophy 169, 273
hyphae 158
hypolimnion 200

Hypophthalmichthys molitrix 40, 47, 218, 219, 220
IBP water-bodies 170
ice-break 10, 13
ice-cover 9, 11, 14
ichthyoeutrophication 49, 54
IJsselmeer 29, 30, 31, 32, 33, 34, 35, 75, 77, 84
water intake from 32
water quantities 78
Iliocryptus sordidus 167
illumination 244
increment/age relationship of roach 62
infection by pathogens 157
ingestion rates 119, 120
inorganic C:P ratio 9
N:P ratio 9
nutrients 13
insect larvae 47
population 110
insolation 9, 131, 133, 134, 137, 246, 247
interaction between trophic levels 29
interactions 149
abiotic 29, 36
between fish and avian predators 230
between fish and plankton 39, 67
between sediment and water 139
biotic 7, 29, 36
within the biological community 149
internal effects 220
loading from sediments 57
release 262
International Biological Programme 319
interspecific competition 47, 55
interstitial water 24, 25, 26, 93
intestinal contents of bream 214
intraspecific competition 65, 66, 67
introduction of exotic species 7, 316
invasion of *Dreissena polymorpha* 234
invertebrate predators 208
iron availability 320
– bound phosphorus 146
irradiance 156, 244
Israel 39, 44, 47, 48, 53
Israel National Water Carrier 47, 53
nuisances and control 48
Ivlev electivity index 266, 267

Jutland 140, 150

Kejimkujik National Park 107
Kellicottia longispina 6, 205
Keratella 39, 40, 174, 177, 289
cochlearis 6, 40, 205, 206, 207
valga tropica 40
Keszthely 269, 271, 273
– basin 190, 297, 305
kingfisher 226

Kis-Balaton Control System 297, 298, 305
Koevorder Meer 75

laboratory scale enclosures 242, 243
Lago Maggiore 1, 3, 4, 5, 6, 7, 208
Lake Balaton 189, 190, 191, 192, 193, 196, 197, 213, 214, 215, 218, 219, 220, 249, 250, 251, 242, 253, 269, 270, 271, 272, 297, 298, 305
Lake Beaverskin 106
Lake Breukeleveen 87, 90, 92, 93, 94, 131, 174, 176, 178, 179, 180, 181, 258
Lake Constance 111, 112, 113, 119, 120, 121, 206
Lake Eastern Loenderveen 258
Lake Erken 9, 10, 11, 12, 13, 14
Lake Gatum 316
Lake Gjersjoen 159
Lake Goplo 233
Lake Grafton 107
Lake Juno 23
Lake Kejimkujik 106, 107
Lake Kinneret 39, 40, 41, 42, 43, 44, 49, 50, 52, 53, 54
Lake Laytoris 106
Lake Loosdrecht 87, 88, 89, 90, 91, 92, 93, 94, 129, 130, 131, 134, 135, 136, 137, 173, 174, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 241, 242, 244, 245, 246, 247, 257, 258, 260, 261, 262, 265, 320
Lake McGinty 107
Lake Mikolajskie 23, 24, 25, 26
Lake Niegocin 23
Lake Pebbleloggitch 106
Lake Ringsjön 57, 58, 59, 61, 63, 65, 66
Lake Round 294
Lake Sevan 15, 16, 17, 20
Lake Sobygard 139, 140, 141, 144, 145, 146, 149, 150, 155, 158, 159, 161, 255
Lake Sovdeborgssjön 224, 225, 228, 229, 230
Lake Victoria 316
Lake Vuntus 87, 90, 91, 92, 93, 131, 174, 178, 179, 180, 181, 258
Lake Wobel 23
Lake Zegrzynskie 233, 234, 235, 237, 238, 240
Lake Zwemlust, 287, 289, 291, 292, 294
lake-dwelling carnivore 229
lakes 199, 316
  in Hungary 190
  in Nova Scotia 106
  in the Halifax-Sackville area 106
  in the Netherlands 84, 87
  Masurian 233
  of north-eastern Poland 123, 124
  Quebec 185
  recovery 1, 7, 94
  stratified 105
  Swiss 234
  unstratified 105
    in western Canada 98
landlocked shad 7
Larus ridibundus 226
larvae dispersion 189
  numbers 193
larval chironomid count 190, 192, 194
  smelt 29, 30
leaves 258
length-classes 31
  – frequency distribution 31, 62
  roach 61
  – weight equation 152
  – weight relationship 182
  age relationship of roach 62
Lepadella 177
Lepomis macrochirus 223
Leptodora 61
Leptodora kindtii 58, 62, 176, 178, 179, 184, 205, 207, 210
Leucaspius delineatus 291
light 130, 243
  attenuation 241, 244, 245
    coefficient 245
  availability 137, 241
  characteristics 242
  climate 119, 175
  conditions 11, 24, 25, 26, 129, 200, 265, 247
  energy 241
  intensity 26, 201
  irradiance 242, 246
  limitation 130, 262
  optimum 105
  penetration 249, 258
  roles of 129
  underwater 137
  uptake rate 245
  – energy supply 94
  – limitation 127
  – limited growth 42, 92, 129, 131, 242, 244
  – limiting conditions 130, 243, 246
limnological characteristics 234
littoral 23, 26
  flora of eutrophic lakes 23
  of *Vaucheria dichotoma* 25
  sediment 23, 26
  sites 227
  water 224, 230
  zone 213, 216, 219, 220, 234, 235, 269, 273, 290
Liza ramada 40
loading 75
  internal 150
loafing period 226
long-tailed duck 237
long-term effects 316
loss processes 249, 253
  rate 131, 137
LSE 245
Lugol's iodine solution 112

Lyngbia limnetica 249, 252
Lyngbia sp. 265

macro-zooplankton 255
macrophyte biomass 258, 261
  cover 261
  coverage 260
  decay 257
  decomposition 262
macrophytes 17, 23, 29, 68, 71, 108, 150, 229, 257, 260, 269, 288, 315, 319
  annual biomass of 17
  P/B coefficient 17
  production 17
  submerged 23, 26
  weight 270
Major Sevan 15, 16, 17, 18, 19, 20
man-made eutrophication 213
  lake 233
management 75, 84
  hydrology 36
  lake 7
  of hydrological regime 31
Margalef's succession theory 250
mass balance 158
Masurian Lakeland 23
maturity 71
mean weight 62
Megacyclops gigas 179
Mellanitta nigra 235
Melosira
  islandica ssp. *helvetica* 11
  italica ssp. *subarctica* 253
  spp. 175
mergansers 226, 229, 230
Mergus serrator 225
Merismopedia blooms 98
meso-eutrophy 7
Mesocyclops 39, 40, 42
  leuckarti 6, 179, 205
  ogunnus 39, 40
  oqunum 50
mesotrophic lakes 108, 150, 185, 200, 260
metabolic demands 229
  rate 235
metalimnetic community 209
metalimnion 201
meteorological factors 251
methanol-extraction 166
Michaelis constant 13
microbial activity 146
  community 112
  flora 84
  loop 111, 112, 120, 121, 317
microciliates 111, 112
Microcystis 49
  aeruginosa 287, 289
  blooms 98
  spp. 98
micronutrients 13
microplankton 111, 120, 121
  assemblages 112, 120
Micropterus salmoides 219
microzooplankton 116, 185, 315
mictic eggs 160
migrating homoiothermic bird populations 228
migration 226
Milvus milvus 226
mineralization 84, 213
  rate 89
mineralized organic content 191
Minor Sevan 15, 16, 17, 18, 19, 20
Mirogrex terraesanctae 40
mixing 90, 308, 310, 311
Mn 190
modelling 75
models in the P-flux 319
Moina micrura 167
  rectirostris 41
molluscs 218, 233, 235
  biomass 233
  abundance 239
  community 235
  consumption 233
  dominance structure 233
  energy values 235
  percentage composition 235
  populations 233
molluscan fauna 234
  prey populations 233
molluscivorous birds 233
molybdate reactive silicon 13
Mondsee 199, 200, 201, 202, 203, 204, 205, 206, 207, 208
monoculture 54
Monogononta 177
morphometric characteristics 1, 17, 90, 175, 220, 260, 300
morphometry 87, 88, 90, 213
mosaic-like distribution of fish stocks 216, 219, 220
mud 25
Mugil cephalus 40
mullets 40, 49
Myriophyllum spicatum 269, 270

N total 31, 43, 44, 140, 141, 142, 143, 144, 145
N-fixing 102, 311
N:P forms 102
N:P ratio 13, 43, 44, 97, 99, 100, 101, 102, 103, 153, 154, 158, 199, 311
  in phytoplankton 149
$NaHCO_3$ 244
nanoflagellates 175, 184
nanophytoplankton 120

biomass 44
nanoplankton 111, 120, 126
enhancement 44
growth 58
Narew River 234, 235
natural lakes 235
recruitment 220
nauplii 39, 179, 185, 205, 278, 290
stages 167, 170
neonates 41
Netofa reservoirs 47, 48, 49, 53
Ni 190
niche separation 184
nitrate (NO_3; NO_3-N) 10, 12, 97, 140, 142, 143, 144, 157, 158, 204, 289
concentration 141, 155, 204
consumption 144
depletion 149, 153, 154, 156
input 145
– nitrogen 3, 24, 25, 98, 200, 202
removal from water 26
nitrification 12, 145
activity 145
nitrite (NO_2; NO_2-N) 12, 98, 140
concentrations 141
nitrogen (N) 9, 23, 77, 103, 139, 144, 195, 199, 257, 260, 261
and phosphorus cycling 9, 12, 26, 261
concentration 3, 75, 84, 144, 145, 147
content 153, 154, 158
dissolved 98
inorganic 98
fixation 97
forms 98
increase 145
input 144, 145, 147
external 145
limitation 97
loading, external 142
pathway 147
recycling 145
between sediment and water 147
release rates 145
requirements 257
soluble inorganic 16, 278
total (TN) 153, 278, 308, 309
uptake 144
utilization 23
– fixing blooms 103
– fixing species 103
Nitzschia 98, 249, 252
non-breeding period 235
season 239
– native species 218
– Pyrrhophyta 43
– pyrrhophytes biomass 44
northern Poland 123, 233, 235, 265
northern Italy 1
Nova Scotia 105
Nuphar 260
luteum 224, 258, 260, 285, 287, 288, 291
nutrients 9, 15, 20, 23, 26, 29, 36, 55, 97, 123, 127, 130, 147, 173, 191, 199, 278, 315
availability 320
concentration 31, 75, 140, 141, 144, 199, 202, 275
competition 253
conditions 9, 14, 107, 249
content 24, 126, 127, 195, 258, 261
pore water 249
sediment 191
effects 315
egestion 313
enrichment 13, 204
exchange 36
exhaustion 157
external loading 241
flow rates 186
flux 186
influx 44
input 44
interactions 139
level 36, 57, 157, 257
limitation 97, 102, 103, 158, 311
limiting 9
loading 57, 65, 108, 139, 149, 219, 275
from agriculture 57
oscillations 103
rates 262
ratios 97
recycling 7, 139, 199, 258
reduction 7
release 186, 257, 262, 313
status 189
supply 7, 44, 65, 109, 127, 249, 253
– saturated water 130
utilizing 7
Nymphaea 260
alba 224, 258
nymphaeid species 259
Nymphoides peltata 258, 260

OECD lakes 108, 319
regression line 108
– model 7
offshore areas 216
oligo-mesotrophic conditions 190
oligo-mesotrophy 4
Oligochaeta 234
oligotrophic lakes 108, 150
water reservoir 258
oligotrophication 7
oligotrophy 7, 186

omnivores 235, 237
open water 224, 229, 230
  area 213, 220, 227
optical depth 246
Oreochromis aureus 40
organic carbon content 166, 169, 191, 193, 195
    transfer 121
  sediment 195
  matter 26, 47
    circulation 54, 55, 189, 193, 196
    content 24, 25
    dissolved 26
    in the sediment 54
    quantity of suspended 54
    resuspension 54
    suspended 47, 50, 51, 53
      annual load 53
  soils 105
  suspended solids 53
orthophosphate 9, 13, 32, 140, 142, 278
  concentration 153, 158
Oscillatoria 29, 47
  agardhii 31, 92, 127, 175, 244, 246, 253, 265
  limnetica 130, 175, 265
  redekei 175, 265
  rubescens 4, 201, 209
Oscillatoria spp. 175
Osmerus eperlanus 31, 32
osprey 226
overfishing 219
overturn 10
oxic conditions 93
oxygen 17, 24, 141, 145, 150, 152
  concentration 19, 78, 141, 142, 149, 152, 154, 262
  condition 191
  consumption 144
  depletion 98
  dissolved 50, 53, 249, 250, 251
  method 167
  production 244
  profiles 253

Pandion haliaetus 226
parasitism 253
partial light attenuation coefficient 131, 246
particulate feeders 40
  matter 13
  organic matter 153
  – feeding fish 43
passage 234
pathogens 157
Pb 190
P/B coefficient of macrophytes 17
P/B value 167, 170
peat dredging 131
Pedalia fennica 40
pelagial 17
  community 14
pelagic bacteria 111
    cell numbers 113
    free-living 111
  fish 208
  insects 109
  species 7
  system 1
  waters 6
  zone 64, 199, 200
  zooplankton 67
Pelecus cultratus 218, 220
Perca fluviatilis 219, 227, 291
perch 57, 59, 61, 65, 66, 72, 227, 229, 230, 291
percids 223
Peridinium 47, 50, 51, 52
  aciculiferum 11
  cells 40
  cinctum 47
persulphate oxidation method 106
  digestion 140
perturbations 197
pH 10, 78, 105, 106, 107, 109, 146, 149, 150, 152, 153, 154, 155, 157, 158, 159, 160, 161, 176, 291, 313
  – level 160
  – effect 159
phaeopigment 133, 244
Phalacrocorax carbo 229
phenol-hypochlorite method 98, 141
phenological pattern 193
  period 234, 235
Philodina sp. 177
phosphatase action 123
phosphate (PO_4; PO_4-P) 10, 145, 157, 289
  concentrations 142
  equilibrium 319
  precipitation 320
  release from decomposing phytoplankton 146
    rate 186
  uptake 130, 241
    capacity 137
    kinetics 130
  – phosphorus 23, 24, 25, 200, 202
    content 24
    removal from water 26
phosphorus (P) 9, 16, 23, 57, 75, 77, 78, 89, 90, 92, 95, 105, 130, 139, 140, 144, 145, 195, 201, 209, 257, 260, 261
  allochthonous load 173
  as growth-limiting factor 94
  availability 4, 129
  balance 84, 131
  budget 90, 258
  concentration 2, 4, 7, 29, 31, 75, 78, 80, 84, 89, 90, 91, 92, 93, 106, 123, 124, 125, 140, 144, 150, 199

in sediment 87
reactive 3
conditions 13
consumption 92
content 13, 44, 158, 201
of seston 92, 93
surplus 13
in sediments 88, 93
cycling 75, 87
deficiency 13
in phytoplankton 13
dissolved 98
dynamics 87
excreted by zooplankton 87, 93, 127
external input 90, 142, 261
loading 87, 94, 173, 175
Fe- and Al-bound 84
flow 87, 88, 89, 90, 91, 92, 93
fluxes 84
forms 98, 126, 127
horizontal and vertical distribution 87
in detergents 3
inorganic 153, 262
input 92, 123, 199, 257
internal loading 83, 94, 258
limitation 13, 92, 137, 158, 253
limited growth 92, 241
limiting 204
load 2, 4, 7, 57, 75, 77, 78, 80, 83, 88, 89, 90, 96, 108, 129, 137, 139, 140, 145, 149, 150, 173, 195, 220, 257, 261, 262
anthropogenic 3
external 140
internal 140
movement 262
output 142
particulate 13
pool in the sediment 140
reactive 2
recycling 87, 94, 96, 257, 261
regeneration 93, 123, 125, 186
by fish 93
by zooplankton 123, 124, 127
rate 126
release 80, 84, 92, 145, 158, 200, 261
from sediment 80, 87, 90, 93, 142, 150
rate 93, 146
redox dependent 146
dynamics 191
retention 140
sedimentation 147
soluble reactive 140
sources 57, 126
storage 13, 92
in fish 93
total (TP) 2, 3, 5, 13, 29, 31, 32, 33, 34, 35, 43, 44, 78, 79, 83, 84, 87, 89, 90, 108, 109, 123, 126, 131, 141, 142, 143, 144, 146, 153, 202, 278, 308, 312
concentrations 262
turnover 14
time 126
uptake 13, 89, 123, 126
kinetics 92
utilization 23
– limited lakes 262
– mineralization rate 91
photosynthesis 242
photosynthetic activity 20, 24, 25, 26, 155
of *V. dichotoma* 23
capacity 152, 156
rate 204
Phragmites 259, 260, 286, 287
Phragmites australis 258, 260
physical limitation 205
physico-chemical cycles 220
environment 130, 199
physiological potential 130
phytoplankton 4, 10, 13, 17, 18, 19, 26, 31, 35, 43, 47, 51, 68, 102, 106, 123, 125, 129, 149, 151, 153, 157, 165, 166, 186, 199, 200, 206, 234, 243, 245, 249, 250, 278, 293
^{14}C-activity 152
abundance 166
annual biomass 17
assemblage 199, 203
biomass 9, 11, 44, 65, 113, 123, 125, 126, 137, 139, 140, 142, 143, 144, 145, 146, 149, 151, 153, 155, 157, 158, 160, 166, 167, 169, 203, 204, 206, 207, 275
biovolume 113
bloom 113, 116, 167
changes 251
collapse 139, 140, 142, 143, 144, 145, 146, 147, 149, 150, 154, 157, 159
community 4, 7, 57, 126, 127, 155, 161, 249, 250, 253
structure 251
composition 97, 130
control 53
dynamics 129, 201, 241, 247
exchange 36
grazing 161, 293
groups 123
growth 92, 130, 161, 201, 241, 262, 292
rate 14, 242
labelled 152
microstratification 249
numbers 166, 169, 278
outburst 13
phosphate uptake 146
phosphorus demand 87, 90
– limited 92
populations 68, 209, 319
production 10, 15, 20, 160
quantity 49

shading 258
species 252
composition 9, 11, 130, 149, 199
spring outburst 11, 12
stability of community structure 19
structure 15, 20
succession 249, 251
temporal trends 44
total 5, 44
trichome-forming 93
uptake rate 92
– dominated ecosystems 89
– zooplankton interactions 320
picoplankton 111, 120, 315
pigmentation 130
pike 59, 71, 218, 228, 230, 275, 285, 286, 288, 291
biomass 29
pikeperch 30, 31, 33, 34, 35, 59, 65, 93, 176, 218, 291
biomass 31
piscivores 235, 237
piscivorous birds 223, 224, 229, 230
consumption rates 228
fish 59, 229, 230
piscivory 66
Planctonema lauterbornii 249, 252
planimetry 258
planktivores 57, 58, 60, 65
planktivorous feeding 36
fish 57, 149, 208, 230
predators 207
plankton 17, 20, 53, 319
assemblages 120, 317
biomass 97
community 207, 220, 315
dynamics 1
-feeders 53, 57
Plankton Ecology Group of SIL 320
planktonic crustaceans 165
food web 121
plant cover 258
distributions 258
plants, submerged 47
Pleuroxus aduncus 167
Ploima 177
Po River 1
pochard 233, 235, 237, 239
Podiceps cristatus 224
poikilothermic fish 228
polder lake 75
water 79, 84
polders 31, 36, 77, 78, 80, 82, 84, 90, 131, 173, 175
Polish eutrophic lakes 23
pollution loads 234
Polyarthra sp. 177, 289, 290
dolichoptera 205
vulgaris 205
polymictic lakes 249
Pompholyx sulcata 205
population cycle 67
density 112, 130, 131, 160, 181, 242
dynamics 189, 193, 215, 219, 220,
freshwater pelagic bacteria 112
roach 67
exponential increase 160
features 233
fluctuations 177
growth 159
increase capacity 159
bream 36
whitefish 66
populations 6
Cladocera 71
slow-growing 65
positive synergism 54
post-capture escape 230
post-collapse period 155
Potamogeton berchtoldii 291
Potamogeton crispus 291
Potamogeton perfoliatus 269, 270, 271, 273
potassium persulfate digestion 141
prairie lakes 98
pre-collapse period 160
precipitation 31, 105, 320
predation 7, 29, 67, 160, 186, 199, 200, 207, 211, 223, 255
by birds 230
by fish 185
in fish communities 223
in freshwater ecosystems 223
levels 228
on zooplankton 65, 66, 315
pressure 36, 43, 158, 160, 161, 223, 224, 228, 229, 230, 233, 235, 315
on zooplankton 40, 57
predator detection 230
– prey relationship 113, 208, 233
predatory activities 229
fish 57, 230
larvae 195
prey 40, 61, 62
roach 71
population production 239
size 64, 230
primary producers 213
production 4, 9, 11, 12, 14, 15, 17, 20, 31, 50, 88, 90, 91, 92, 105, 106, 109, 130, 140, 141, 144, 146, 149, 157, 161, 165, 166, 167, 169, 170, 176, 186, 214, 215, 218, 220, 253, 293, 309
periphytic 50
principal visitors 226
Prochlorothrix hollandica 92, 129, 130, 173, 175, 241, 242, 244, 245, 246, 247
Procladius sp. 190, 191

production 41, 218
Acanthocyclops robustus 166
Bosmina longirostris 166
Cladocera 39
Copepoda 39, 41
energetics 185
macrophytes 17
rates 12, 213
secondary 31
productivity 3, 7, 19, 44, 166
annual 19
parameters 169
proflavine staining technique 255
Prokaryota 241
prokaryotic species 129
Protozoa 177, 185
protozoan production 11
pyritic rocks 105

Raritan river 169
rate of population change 209
razor fish 218, 220
recolonization 93, 159
recreation 316
recruitment 29, 67, 70, 71, 72
roach 67, 68
red kite 223, 226, 228
Red Sea, oligotrophic waters 119
red-breasted merganser 223, 225, 226, 227, 228
Redfield ratio 201
redox potential 146, 191
reduction 42
reed 31
reedbeds 227, 230
refuge-affording structure of the reedbeds 230
refugium areas 219
rejection mechanisms 159
release rates 139
removal of heavy metals 320
renewal of water 170
reservoir of drinking water 44
reservoirs 169, 316
residence time 49, 77
resident birds 228
resilience 7
ecosystem 90
respiration at the sediment surface 145
respiratory activity 220
restoration 7, 77, 87, 90, 94, 173, 174, 257, 258
measures 87, 176, 177, 200
process 319, 320
programmes 320
resuspension 78, 80, 92, 129, 130, 133, 134, 135, 136, 140, 146, 151, 175, 244, 275, 311
retention time 53, 150, 170, 249, 250
rhizomes 258
rhizopods 177
Rhodomonas minuta 251
Rhodomonas spp. 98
Rhynchotalona falcata 179
roach 57, 59, 62, 65, 68, 70, 71, 72, 158, 227, 229, 230, 234, 240, 291
role of piscivorous birds 231
root stocks 258
systems 257
uptake 262
roots 258
rotifer abundance 184
biomass 184
composition 177
densities 177, 178
dynamics 177, 184
numbers 174
population 155
species 205
Rotifera 6, 39, 40, 42, 43, 44, 71, 116, 177, 206, 207
abundance 207
in phosphorus recycling 93
rotifers 154, 159, 160, 173, 184, 185, 200, 208
distribution 210
rudd 59, 158, 227, 230, 285, 288, 291
running waters 170
Rutilus rutilus 67, 158, 227, 234, 291

Salix 285, 287
Scardinius erythropthalmus 158, 227, 288, 291
Scenedesmus 154, 155, 157, 158, 159, 289
community 155
protuberans 246
quadricauda 158
Schindler-Patalas trap 200
Schoenoplectus lacustris 258, 260
Scirpus 259
seasonal change 97
succession 199, 249
trends 255
seasonality 229
Secchi disc depth 129, 130
transparency 140, 160, 175, 200, 287, 289, 308, 313
secondary producers efficiency 169
production 167, 218
productivity 165, 170
sediment 12, 144, 159, 191, 242
cores 146
factors 190
mixing 313
quality 189
release 253
surface 200
traps 158
– dwelling chironomids 190, 191, 193
– water interaction 139, 140

– water interface 141
sedimentation 49, 120, 139, 145, 146, 242
diatoms 11
fine particles 84
organic matter 144
organic nitrogen and phosphorus 147
rate 157, 158
traps 144
velocity 157
sediments 26, 83, 84, 92, 93, 95, 291
selective feeding 200
light absorption 245
selenium 14
self-controlling processes 197
– purification 269
– sustaining stocks 219
seston 88, 89, 90, 133, 176, 184, 242, 246, 257, 267
biomass 174
concentrations 89, 90, 173, 176
dynamics 130
mass 175
sestonic concentration 261
dry weight 137
food 173, 293
sewage water 75
– treatment plants 191
Shad 6
shallow lakes 67, 87, 139, 149, 158, 177, 189, 190, 213, 223, 249, 250, 251, 253, 257, 258
sheatfish 218
shoaling 230
shoreline-length 215, 216, 217
:water area ratio (S/A) 213, 214
short-term changes 249
shrimps 47
Sida cristallina 6
silica concentrations 204
soluble reactive (SiO_2) 200, 205
silicate 199, 209
depletion 204
silicon 13
Silurus glanis 219
silver carp 40, 47, 49, 53, 54, 55, 218, 219, 220
energy flux 220
annual yield 47
impacts 49
in polyculture 54
introduction 49
nourishment patterns 49
similarity range 252
single-celled species 249
sinking 129, 130, 253
size classes of roach 67
distribution, *Bosmina coregoni* 64
Chydorus sphaericus 64
Cyclops spp. 64
Daphnia cucullata 64
Daphnia longispina 64
Eudiaptomus graciloides 64
efficiency hypothesis 184
frequency, *Corophium curvispinum* 271
roach 69
– class structure 39
– selective predation 182, 184
– specific selectivity 208
Slotermeer 75, 77, 78, 83, 84
smelt 29, 34, 35
biomass 36
population 30
predation 34
snails 47
snow-cover 11, 14
solitary forms 177
spawning population 71
species balance 64
composition 4, 14, 39, 130, 182, 184, 191, 269, 270
in the gillnet catches 59
of microcrustaceans 67
diversity 167, 309, 316
dominance 182
introduction 219
non-native 219
number 235
richness 150, 235
– specific distribution 226
patterns of abundance distribution 223
specific alkaline phosphatase activity 13
clearance rates 173
growth rate 129, 131, 133, 135, 136, 242, 246
light attenuation coefficient 243, 244, 246
uptake rate 244
maintenance constant 131, 245
rate 246
surplus phosphorus content 13
spectral composition 244
Sphaeridae 235, 240
Sphaerocystis spp. 253
Sphagnum bogs 175
sporangia 158
spring bloom 9, 10, 14
outburst 13
passage 237, 239
peak 14
stagnant backwaters 191
standing crop 71, 123, 126, 127, 170, 199
stocks 7
of HNF 119
Staurastrum sp. 127
steady state 130, 131, 242, 244, 245
continuous cultures 242
growth kinetics 241
kinetics 129

population density 244
stems 258
Stephanodiscus hantzschii f. *tenuis* 167
Stephanodiscus hantzschii var. *pusillus* 9, 11, 14
Stephanodiscus minutula 167
Stephanodiscus rotula 11
stereographic analysis 258
Sterna hirundo 226
stickleback 234
Stizostedion lucioperca 31, 93, 176, 218, 220, 291
stock density 215
stocking 40, 308
stocks of bream 29
burbot 65
pike 65
pikeperch 29
storm-induced destratification 249
stratification 10, 31, 113, 123, 124, 126, 140, 253
stratified lakes 206
stream-dwelling herbivore 229
structuring forces 211
stunted perch populations 230
subfossil chironomid fauna 191
submerged macrophyte 269, 270, 273
vegetation 150, 288
substrate concentration 13, 119
subsurface light 245
sulphanilamide-naphthylethylene diamine method 98
sulphur content 191
supraindividual level 197
surface irradiance 200
reflection 245, 246
survival 29
suspended matter 308, 320
analysis 49
solids 50, 308, 310
sustained respiration 141
swimming behaviour 40
Sweden 57, 223, 224, 226
Synchaeta 177, 205
oblonga 40
pectinata 40
Synedra 98
Szczecin Firth 233
Szigliget-basin 190
SZ/LZ ratios 42, 43

Tabellaria flocculosa 201
Tanypus spp. 190
target species 316
TDE 191
temperature 35, 310
summer 20
– dependence 146
tench 291
terns 230
tertiary consumers 317
test fishing 59
catches 61
Thalassiosiraceae 165, 167
The Netherlands 29, 30, 75, 76, 89, 129, 131, 173, 178, 241, 257, 265, 275, 285, 286
thermal heterogeneity 175
stratification 200, 204, 209, 249
Thermocyclops 39, 40, 42
crassus 179
dybowskii 39, 40, 50
oithonoides 179
^{3}H-thymidine incorporation 308, 311
Ticino River 1
Tihany-peninsula 215, 250, 269, 271, 272, 273
Tihany-well 217
tilapia 47, 49, 53, 54, 55
growth 54
Tilapia aurea 54
Tinca tinca 291
Tintinnopsis lacustris 177
tissue analysis 258
N 257
P 257
Tjeukemeer 29, 30, 31, 36, 75, 77, 78, 80, 83, 84, 185
Tjonger River 83
TOC 189
top predators 120
trophic level-organisms 316
– down effects 36
– down forces 44, 65, 315, 316
toxic compounds 219
trace-elements 244
Transeau's preservative 106
translocation 262
transparency 10, 19, 29, 78, 150, 157, 293, 310, 313
Trichocerca 177, 205
trichome-forming prokaryotes 90
trichomes 266, 267
tripton 129, 130, 131, 241, 242, 243, 245, 246, 247
concentration 131, 133, 243, 246
trophic chain 15
cascade 315
connections 219
evolution 1
gradient 215, 219
groups 235
interactions 44, 111, 149, 199
levels 7, 32, 33, 34, 57, 87, 88, 90, 92, 150, 170, 200, 206, 312
relations 233, 273, 316
in inland waters 319
relationships 77, 112, 185, 199, 213, 223
between HNF and ciliates 116
response 105, 108, 110
status 1, 3, 5, 7, 15, 89, 97, 126, 165, 169, 170, 173, 197,

257, 260, 262
structure 57, 160
trophogenic layer 47, 50
zone 120
trophy, lake 6
trout 6
Tsalmon reservoir 47, 48, 49, 53, 54
tufted duck 233, 235, 237, 239, 240
turbidity 249, 275, 278
turf 26
turnover 12
time 170
Typha 259, 260
angustifolia 258, 260

underwater chasers 230

Vaucheria dichotoma Ag. 23, 24, 25, 26
dry weight 25
growth rate 24
Vecht River 87, 90, 131, 175, 287
vegetable food 62
vendace 71
vertical attenuation 243
coefficient 245, 246
extinction 137
migration 11, 251
mixing 113
visiting birds 229
piscivores 225, 226, 228
Vistula river 169
Viviparus viviparus 235, 240
Volga river 169
Volvox spp. 253
vulnerability 40

Waddenzee 75
waste water 75, 87
discharge 87, 90, 92
Water Action Programme 78
water balance 77, 78
blooms 15, 17, 19
borax-buffered 152
budget 173
characteristics 139
chemistry 68
circulation 93
colour 78
discharge 90, 166, 169
exchange rate 234
– fowl 233
input 33, 34
intake 29, 31, 34, 35, 36
– level fluctuations 169
lilies 227, 230
lily zone 227, 229
management 90
oxygen-saturated 152
– plants 92, 93, 94
purification 195
quality 53, 75, 78, 103, 105, 107, 189, 254, 275, 315, 316, 320
and quantity model 77
deterioration 189, 197
gradient 189
management 77, 84
standard 78
renewal time 1, 131
reservoirs of the USSR 49
residence time 10, 140, 266, 316
– supply systems 316
temperature 20, 29, 31, 32, 33, 34, 113, 114, 133, 137, 142, 145, 154, 156, 157, 158, 166, 186, 199, 201, 210, 228, 265
transparency 113, 114
velocity 77
white bream 291
whitefish 59, 61, 65
wind effect 129, 249
roles of 129
velocity 250, 251
Winkler-technique 152, 250
winter overturn 2, 3
stratification 14
wintering period 237
Woloszynskia ordinata 11

yield 53, 61, 213, 214, 215, 216, 217, 218, 220
from gillnet catches 62
pelagic fish species 6

Zala river 297, 298, 299, 301, 304, 305
Zala watershed 297, 306
zoobenthos 40, 54
zooflagellates 177
zooplankters 120
zooplankton 6, 29, 31, 36, 40, 47, 50, 52, 55, 57, 61, 62, 63, 65, 66, 67, 71, 89, 90, 106, 123, 125, 126, 149, 151, 159, 165, 166, 177, 200, 204, 209, 218, 234, 253, 262, 275, 278, 289
abundance 93, 105, 108, 109, 110, 174, 184
analysis 49
assimilation 88
biomass 9, 40, 41, 44, 49, 65, 71, 139, 152, 153, 174, 181, 182, 184, 185, 206, 220, 293
clearance rate 154, 155
community 4, 6, 36, 39, 43, 57, 58, 71, 161, 200, 206, 220, 293
composition 60, 62, 71, 126, 149, 170, 174, 184, 199
consumption 120
control 53
crustacean number 50

density 39, 42, 149, 151, 160
development 205
distribution 210
dominant species 50
dynamics 160, 204
egestion 88
excretion 89, 90, 93
filter-feeding 158
grazing 12, 58, 90, 93, 123, 127, 157, 199, 242, 254, 292, 293
  rate 152, 293
herbivorous 127, 157, 293
horizontal patchiness 175
in whitefish diet 58, 60
long-term changes 39
number 53, 109
phosphorus excretion 93, 123
population 4, 42, 199, 211
population dynamics 39, 199
  seasonal distribution 39
predation by fish 64
pressure 127
production 40, 44
quantity 49
reproduction 159
size 61
  distribution 60
  groups 155
structure 158, 159, 173, 174, 182, 183
survival 159
trophic groups 127
– feeding 57
zoospores 157
Zooplankton Predation Index (ZPI) 42, 43